

I claim:

1. An improved power transmission belt tensioner of the type having a first pulley adapted to communicate with a surface of a power transmission belt, a first arm supporting said first pulley upon which said first pulley is rotatably mounted via a first pulley bearing, a second pulley adapted to communicate with a surface of said power transmission belt, a second arm supporting said second pulley upon which said second pulley is rotatably mounted via a second pulley bearing, the improvement comprising:
  - 10 a strut,
  - a first attachment point for said strut,
  - a second attachment point for said strut,
  - said strut attached to said first and second attachment points,
  - said first arm rotatably supported at a first pivot,
  - said second arm rotatably supported at a second pivot, and
  - 15 said first pulley and said first attachment point each being laterally offset in relation to said first pivot and substantially balanced in terms of parasitic torque across said first pivot.
2. The improvement of claim 1 further comprising, said second pulley and said second attachment point each being laterally offset in relation to said second pivot and substantially balanced in terms of parasitic torque across said second pivot.
- 25 3. The tensioner of claim 1 wherein said first pivot and said second pivot are radially spaced.
4. The tensioner of claim 1 wherein said first pivot and said second pivot are coaxial.

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5. The improvement of claim 1 wherein, said first strut attachment point is laterally opposite of said first pivot in relation to the plane at the center of rotation of said first pulley and said second strut attachment point is laterally opposite of said second pivot in relation to the plane at the center of rotation of said second pulley.

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6. The improvement of claim 5 wherein, said first strut attachment forms part of a first member extending from a support for said first pulley bearing and said second strut attachment forms part of a second member extending from a support for said second pulley bearing.

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7. The improvement of claim 3 wherein, said first and second members are shields.

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8. The improvement of claim 1 wherein, said first strut attachment point is laterally opposite of said first pulley in relation to the plane at the center of rotation of said first pivot and said second strut attachment point is laterally opposite of said second pulley in relation to the plane at the center of rotation of said second pivot.

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9. The improvement of claim 8 wherein, first pivot includes a first pivot bearing and said first strut attachment point is beyond the lateral limits of said first pivot bearing.

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10. The improvement of claim 8 wherein, first pivot includes a first shaft and said strut attachment forms part of a member extending from said shaft.

11. The improvement of claim 9 wherein, the plane at the center of rotation of said first pulley is beyond the lateral limits of said first pivot bearing.

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12. The improvement of claim 8 wherein, said first pulley is radially opposite of said first attachment point in relation to said first pivot.

13. The improvement of claim 10 wherein, said member is a lever arm.

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14. The improvement of claim 1 wherein said tensioner includes a base adapted to support an accessory.

15. A power transmission drive comprising:

10                    a crankshaft pulley;  
                      an accessory pulley;                    ✓  
                      a power transmission belt;  
                      a power transmission belt tensioner having a first tensioner pulley  
                      adapted to communicate with a surface of said power transmission  
15                belt, an first arm supporting said tensioner pulley upon which said  
                      first tensioner pulley is rotatably mounted via a first pulley  
                      bearing, a second tensioner pulley adapted to communicate with a  
                      surface of said power transmission belt, a second arm supporting  
                      said tensioner pulley upon which said second tensioner pulley is  
                      rotatably mounted via a second pulley bearing, a strut, a first  
20                attachment point for said strut, a second attachment point for said  
                      strut, said strut attached to said first and second attachment points,  
                      said first arm rotatably supported at a first pivot, said second arm  
                      rotatably supported at a second pivot, said first pulley and said first  
                      attachment point laterally offset in relation to said first pivot and  
                      substantially balanced in terms of parasitic torque across said first  
25                pivot; and,  
                      said power transmission belt trained about said crankshaft pulley, said  
                      accessory pulley and said tensioner pulley.

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16. The power transmission drive of claim 15 further comprising, said strut attachment point being laterally opposite of said pivot bearing in relation to the plane at the center of rotation of said tensioner pulley.
- 5        17. The power transmission drive of claim 15 further comprising, said strut attachment forms part of a member extending from a support for said pulley bearing.
- 10      18. The power transmission drive of claim 17 further comprising, said member being a shield.
- 15      19. The power transmission drive of claim 15 further comprising, said strut attachment point being laterally opposite of said pulley in relation to the plane at the center of rotation of said pivot bearing.
- 20      20. The power transmission drive of claim 19 further comprising said strut attachment point being beyond the lateral limits of said pivot bearing.
- 25      21. The power transmission drive of claim 19 further comprising, said strut attachment forms part of a member extending from said shaft.
22. The power transmission drive of claim 19 further comprising the plane at the center of rotation of said pulley being beyond the lateral limits of said pivot bearing.
- 30      23. The power transmission drive of claim 21 further comprising, said member being a lever arm.
24. The power transmission drive of claim 15 wherein said power transmission tensioner includes a base adapted to support an accessory.

25. The power transmission drive of claim 15 wherein said accessory is a generator/starter.

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26. A method of tensioning a power transmission belt comprising:

5 providing said power transmission belt,

providing a first pivot bearing,

10 providing a tensioner having a first pulley adapted to communicate with a surface of said power transmission belt, a supporting structure including a first supporting shaft rotatably supported by said first pivot bearing for supporting a first supporting arm, said first supporting arm for supporting said first pulley, said first pulley being rotatably mounted upon said first supporting arm via a first pulley bearing, said first pulley being laterally offset in relation to said first pivot bearing, and a first attachment point for a strut, said first attachment point being laterally offset in relation to 15 said first pivot bearing,

providing a second pivot bearing,

20 providing a tensioner having a second pulley adapted to communicate with a surface of said power transmission belt, a supporting structure including a second supporting shaft rotatably supported by said second pivot bearing for supporting a second supporting arm, said second supporting arm for supporting said second pulley, said second pulley being rotatably mounted upon said second supporting arm via a second pulley bearing, said second pulley being laterally offset in relation to said second pivot bearing, and a second attachment point for a strut, said second attachment point 25 being laterally offset in relation to said second pivot bearing,

providing said strut,

30 communicating a biasing force from said strut to said first and second attachment points,

said first supporting structure communicating said biasing force to said  
    first pulley through rotation about said first pivot bearing,  
    said second supporting structure communicating said biasing force to  
    said second pulley through rotation about said second pivot  
    bearing, and

5                 substantially balancing said biasing force at said first and second pivot  
                       bearings in terms of parasitic torque.